

CLAIMS

What is claimed is:

1. A controlled method for the energy-saving and energy-releasing refrigerating air conditioner where the refrigerating requirement is greater than heating-produced requirement during circulation, and where the refrigerating temperature is greater than setting refrigerating temperature, an energy-saving and energy-releasing refrigerating air conditioning system forces performing refrigerating circulation, which the method comprising the steps of :

(1) in the cases where the 2nd refrigerant back-flow temperature is greater than the 2nd setting temperature with adding setting temperature range, and where the first refrigerant back-flow temperature is greater than the first setting temperature with adding setting temperature range, the refrigerating air conditioning system automatically chooses the 2nd refrigerant circular loop as circulation, and the 2nd refrigerant flow controllers therefore are all opened, and the refrigerant flow rate is at maximum flow rate in the means time , however, the flow of the first refrigerant flow controller is at the minimum flow rate, and the storage means is performing cooling-releasing action;

(2) in the cases where the 2nd refrigerant back-flow temperature is less than or equal to the 2nd setting temperature with adding setting temperature range, and where the second refrigerant back-flow temperature is greater than or equal to the second setting temperature, the first and the second refrigerant circular loops are acting at the same time, and the refrigerant flow rate of the second refrigerant flow controller is a direct ratio to the second refrigerant back-flow temperature, as a result, the refrigerant flow rate is automatically adjusted and makes the refrigerant flow rate of the first refrigerant flow controller is relatively great. Besides, the storage means will perform

cooling-saving and cooling-releasing actions, and will gradually make cooling-releasing action to cooling-saving action;

(3) in the cases where the 2nd refrigerant back-flow temperature is less than the 2nd setting temperature, and where the first refrigerant back-flow temperature is greater than or equal to the first setting temperature, the refrigerating air conditioning system automatically chooses the first refrigerant circular loop as circulation, and the flow of 2nd refrigerant flow controllers in the means time is at minimum flow rate. However, the flow of the first refrigerant flow controller is at the maximum flow rate, and the storage means is performing cooling-saving; and

(4) while the temperature of storage means is less than or equal to the setting temperature, the central air conditioner will stop operation.

2. A controlled method for the energy-saving and energy-releasing refrigerating air conditioner where the refrigerating temperature is less than or equal to the setting refrigerating temperature during circulation, and where the heating-produced temperature is less than setting heating-produced temperature, an energy-saving and energy-releasing refrigerating air conditioning system forces performing heating-produced circulation, which the method comprising the steps of :

(1) in the cases where the first refrigerant back-flow temperature is less than the first setting temperature, and where the second refrigerant back-flow temperature is less than the second setting temperature, the refrigerating air conditioning system automatically chooses the first refrigerant circular loop as circulation, and the first refrigerant flow controllers therefore are all opened, and the refrigerant flow rate is at maximum flow rate in the means time. However, the flow of the second refrigerant flow controller is at the minimum flow rate, and the storage means is performing heating-releasing action;

(2) in the cases where the first refrigerant back-flow temperature is less than or equal to the first setting temperature with adding setting temperature range, and where the first refrigerant back-flow temperature is greater than or equal to the first setting temperature, the first and the second refrigerant circular loops are acting at the same time, and the refrigerant flow rate of the first refrigerant flow controller is an inverse ratio to the first refrigerant back-flow temperature, and while the first refrigerant back-flow temperature is greater, the refrigerant flow rate of the first refrigerant flow controller is smaller, and as a result, the refrigerant flow rate is automatically adjusted and makes the refrigerant flow rate of the second refrigerant flow controller is relatively great, besides, the storage means will perform heating-saving and heating-releasing actions, and will gradually make heating-releasing action to heating-saving action;

(3) in the cases where the first refrigerant back-flow temperature is greater than the first setting temperature with adding setting temperature range, and where the second refrigerant back-flow temperature is greater than or equal to the second setting temperature, the refrigerating air conditioning system makes heating-releasing action to the heating-saving action and automatically chooses the second refrigerant circular loop as circulation, and the flow of the first refrigerant flow controllers in the means time is at minimum flow rate, and however, the flow of the second refrigerant flow controller is at the maximum flow rate, and the storage means is performing heating-saving action; and

(4) while the temperature of the storage means is greater than or equal to the setting temperature, the central air conditioner will stop operation and complete the energy-saving operation.